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EXAMINER	
HO, CHUONG T	

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,406	KUMAR ET AL.	
	Examiner	Art Unit	
	CHUONG T. HO	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15,25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 01/28/08 have been entered and made of record.

2. Applicant's argument with respective to claims 1-15, 25-27 have been considered but are moot in view of the new ground (s) of rejection.

3. Claims 1-15, 25-27 are pending.

Claim Objections

4. Claims 16-24 are objected to because of the following informalities: replace "(withdrawn)" by -----(Canceled) ------. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim1, 7- 9, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. (Pub. No.: US 2005/0128945 A1) in view of Kota et al. (Pub. No.: US 2004/0260832 A1)

Regarding to claim 1, Kuo et al. disclose receiving at a processing element (figure 4, transmit microengine 420) a request to transmit a packet associated with a packet identifier (page 2 [0021] packets identified by port) (page 1 [0001] a network

processor may receive packets and arrange for each packet to be transmitted via an appropriate port) (page 1 [0012] The schedule processing element 110 determines when each packet should be transmitted and provides the packets to a transmit processing element 120 as appropriate. The packets may be scheduled, for example, based on quality of service parameters associated with each packet. The schedule processing element 110 and the transmit processing element 120 may comprise a series of multi-threaded, multi-processing Reduced Instruction Set Computer (RISC) devices or "microengines." According to some embodiments, each processing element 110, 120 is associated with a functional block that performs ATM traffic management operations (e.g., scheduling or transmitting) (page 2 [0021] The transmit microengine 420 stores the packets in an external memory unit 430 that has a single transmit buffer 432 for a plurality of ports. That is, the transmit buffer 432 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate port) (page 2, [0029] The transmit microengine 620 stores the packets in an external memory unit 630 using a single FIFO transmit buffer 632. That is, the transmit buffer 632 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate port);

Determining a number of transmit buffers (local queues) to be associated with the packet (figure 4, page 2 [0023] the transmit microengine 420 could include multiple local queues (e.g., because more than one port might blocked at the same time)).

However, Kuo et al. are silent to disclosing arranged for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Kota et al. disclose arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold (the transmission buffer is empty) (figure 12A, 1235, Home interconnection controller detects empty condition of transmission buffer) (figure 12A, 1240, Home interconnection controller sends control character without storing control character in transmission buffer) (page 1, [0014] determine when the remote transmission buffer is empty, page 2, [0016] forward the special packet for transmission on the inter-cluster link without storing the special packet in the remote transmission buffer) (page 2 [0031] determine an empty condition indicating that the transmission buffer is empty, [0033] forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer) (page 19, lines 3-6, claim 19, determine an empty condition indicating that the transmission buffer is empty; forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer).

Bothe Kuo, Kota disclose multiple processor processing the packets. Kota et al. recognizes arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate arranged for the packet to be transmitted

through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold taught by Kota into the system of Kuo in order to improve reliability and reduce latency of inter-cluster communication in system having multiple clusters of multiple processors (US 2004/0260832, page 1 [0007]).

7. Regarding to claim 10, Kuo et al. disclose receiving at a processing element (figure 4, transmit microengine 420) a request to transmit a packet associated with a packet identifier (page 2 [0021] packets identified by port) (page 1 [0001] a network processor may receive packets and arrange for each packet to be transmitted via an appropriate port) (page 1 [0012] The schedule processing element 110 determines when each packet should be transmitted and provides the packets to a transmit processing element 120 as appropriate. The packets may be scheduled, for example, based on quality of service parameters associated with each packet. The schedule processing element 110 and the transmit processing element 120 may comprise a series of multi-threaded, multi-processing Reduced Instruction Set Computer (RISC) devices or "microengines." According to some embodiments, each processing element 110, 120 is associated with a functional block that performs ATM traffic management operations (e.g., scheduling or transmitting) (page 2 [0021] The transmit microengine 420 stores the packets in an external memory unit 430 that has a single transmit buffer 432 for a plurality of ports. That is, the transmit buffer 432 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate

port) (page 2, [0029] The transmit microengine 620 stores the packets in an external memory unit 630 using a single FIFO transmit buffer 632. That is, the transmit buffer 632 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate port);

Determining a number of transmit buffers (local queues) to be associated with the packet (figure 4, page 2 [0023] the transmit microengine 420 could include multiple local queues (e.g., because more than one port might blocked at the same time)).

However, Kuo et al. are silent to disclosing arranged for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Kota et al. disclose arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold (the transmission buffer is empty) (figure 12A, 1235, Home interconnection controller detects empty condition of transmission buffer) (figure 12A, 1240, Home interconnection controller sends control character without storing control character in transmission buffer) (page 1, [0014] determine when the remote transmission buffer is empty, page 2, [0016] forward the special packet for transmission on the inter-cluster link without storing the special packet in the remote transmission buffer) (page 2 [0031] determine an empty condition indicating that the transmission buffer is empty, [0033] forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer) (page 19, lines 3-6, claim 19, determine

an empty condition indicating that the transmission buffer is empty; forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer).

Bothe Kuo, Kota disclose multiple processor processing the packets. Kota et al. recognizes arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold taught by Kota into the system of Kuo in order to improve reliability and reduce latency of inter-cluster communication in system having multiple clusters of multiple processors (US 2004/0260832, page 1 [0007]).

8. Regarding to claim 13, Kuo et al. disclose an input path to receive a request to transmit a packet associated with a packet identifier; a local memory portion (figure 4, local queues) (figure 4, transmit microengine 420) a request to transmit a packet associated with a packet identifier (page 2 [0021] packets identified by port) (page 1 [0001] a network processor may receive packets and arrange for each packet to be transmitted via an appropriate port) (page 1 [0012] The schedule processing element 110 determines when each packet should be transmitted and provides the packets to a transmit processing element 120 as appropriate. The packets may be scheduled, for example, based on quality of service parameters associated with each packet. The

schedule processing element 110 and the transmit processing element 120 may comprise a series of multi-threaded, multi-processing Reduced Instruction Set Computer (RISC) devices or "microengines." According to some embodiments, each processing element 110, 120 is associated with a functional block that performs ATM traffic management operations (e.g., scheduling or transmitting) (page 2 [0021] The transmit microengine 420 stores the packets in an external memory unit 430 that has a single transmit buffer 432 for a plurality of ports. That is, the transmit buffer 432 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate port) (page 2, [0029] The transmit microengine 620 stores the packets in an external memory unit 630 using a single FIFO transmit buffer 632. That is, the transmit buffer 632 might include the following packets (identified by port): P0, P2, P2, P0, P1 . . . . A hardware unit may then retrieve the packets in order and arrange for the packets to be transmitted via the appropriate port);
Determining a number of transmit buffers (local queues) to be associated with the packet (figure 4, page 2 [0023] the transmit microengine 420 could include multiple local queues (e.g., because more than one port might blocked at the same time)).

However, Kuo et al. are silent to disclosing arranged for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Kota et al. disclose arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not

exceed a pre-determined threshold (the transmission buffer is empty) (figure 12A, 1235, Home interconnection controller detects empty condition of transmission buffer) (figure 12A, 1240, Home interconnection controller sends control character without storing control character in transmission buffer) (page 1, [0014] determine when the remote transmission buffer is empty, page 2, [0016] forward the special packet for transmission on the inter-cluster link without storing the special packet in the remote transmission buffer) (page 2 [0031] determine an empty condition indicating that the transmission buffer is empty, [0033] forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer) (page 19, lines 3-6, claim 19, determine an empty condition indicating that the transmission buffer is empty; forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer).

Bothe Kuo, Kota disclose multiple processor processing the packets. Kota et al. recognizes arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold taught by Kota into the system of Kuo in order to improve reliability and reduce latency of inter-cluster communication in system having multiple clusters of multiple processors (US 2004/0260832, page 1 [0007]).

9. Regarding to claim 7, Kuo discloses request to transmit the packet is received from a queue manager (figure 1, schedule processing element is substantially same as queue manager).

10. Regarding to claim 8, Kuo discloses to use thread in multi-thread, reduced instruction set computer micro engine (page 1, paragraph [0012], lines 7-12).

11. Regarding to claim 9, Kuo discloses microengine is associated with at least one of I) network device II) network processor III) ATM network device (page 1, paragraph [0010]).

12. Claims 2, 11, 14, 4- 6, 12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Kuo – Kota) in view of Shirai et al. (US Patent No. 5,734,654 03/31/1998).

Regarding to claim 2, the combined system (Kuo – Kota) discloses the limitations of claim 1 above; however, the combined system (Kuo – Kota) are silent to disclosing to store packet IP in local transmit queue for that port if the number of transmit buffer exceeds the pre-determined threshold.

Shirai et al. disclose to arrange packet identifier to be stored in local transmit queue for that port if the number of transmit buffer exceeds the pre-determined threshold (figure 18 shows if congestion is detected then packet is stored in common buffer means local memory, congestion is detected based on available resources such

as port, transmitting buffer etc, buffer exceeds a predetermined references value, col. 2, lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Shirai to the combined system (Kuo - Kota) in order to store packet ID in local transmit queue, thereby preventing packets to being discarded (5,734,654, col. 3, lines 55-67).

13. Regarding to claim 11, claim 11 is rejected the same reasons of claim 2 above.

14. Regarding to claim 14, claim 14 is rejected the same reasons of claim 2 above.

15. Regarding to claims 4 - 6, 12, 15, Kuo teaches to check availability of port to transmit packet (page 2, paragraph [0019]); however, the combined system (Kuo – Kota) are silent to disclosing arranging for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Shirai et al. disclose arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold (figure 18 shows that if congestion is detected then packet is stored in common buffer means local memory, congestion is detected based on available resources such as port, transmitting buffer etc., buffer exceeds a predetermined references value, local queue is empty or not, column 2, lines 27-32.

I would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Shirai to the combined system (Kuo – Kota) to transmit packets without storing in local queue to speed up packets processing.

16. Regarding to claim 5, Kuo discloses evaluation is based on a flow-control condition of that port (page 2, paragraph [0019].

17. Regarding to claim 6, claim 6 is rejected the same reasons of claim 4 above.

18. Regarding to claim 12, claim 12 is rejected the same reasons of claim 4 above.

19. Regarding to claim 15, claim 15 is rejected the same reasons of claim 4 above.

20. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Kuo – Kota – Shirai) in view of Karisoon (Pub. No. : US 2002/0146014).

Regarding to claim 3, the combined system (Kuo and Shirai discloses that covers substantially all limitation of parent as claim above; however, the combined system Kuo and Shirai does not teach to store packet in external memory when local transmit queue for that port is full.

Karisoon teaches technique to store packet in external memory when local transmit queue for that port is full (page 9, paragraph [0016].

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Karisoon to process of Kuo to prevent packets from discarded.

21. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al. (Pub.No.: US 2004/0213235 A1) in view of Kota (Pub. No.: US 2004/0260832 A1).

Regarding to the claim 25, Marshall et al. discloses a backplane (figure 2, backplane 220); a first line card (figure 2, line cards 400a, 400b, 400c connected to the backplane 220); and a second line card (figure 2, line cards 400a, 400b, 400c connected to the backplane (220), the second line card including a processing element (figure 4, classification engine 500) having: an input path (figure 4, input interface 420) to receive a request to transmit a packet associated with a packet identifier ([0011], information associated with a packet, e.g., a virtual local area network (VLAN) identifier (ID) and/or destination port ID, is provided to an initial classification stage of a classification engine which generates a criterion, e.g., a packet field, and a rule associated with the packet); a local memory portion (figure 4, queuing logic 440) Determining a number of transmit buffers ([0012], queue ID, The VLAN ID and destination port ID information associated with the packet are applied to the VLAN and port/channel tables, respectively, to generate a set of queue ID base pointers, packet field values, packet field valid values, and rules) ([0013], Information contained in the selected final state table entry is combined with the queue ID base pointers to generate the identifier, i.e., a queue ID, associated with the classified packet) ([0040], The classification engine 500 processes the packet including classifying the packet and determining a queue ID of a calendar queue 442 associated with the classified packet. The queue ID is transferred to the queuing logic 440 which selects a calendar queue

442 associated with the queue ID and places information associated with the packet (e.g., a pointer to the packet in buffer 450) on the selected queue 442. When the information associated with the packet reaches the head of the selected queue 442, the queuing logic 440 transfers the packet from buffer 450 to the output interface 430 where it is transferred out the destination port 217, associated with the destination port ID, onto the network) (see figure 4); arranging for the packet to be transmitted through a port (figure 4, output interface 430).

However, Marshall et al. are silent to disclosing arranging for the packet to be transmitted through a port without storing the packet in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Kota et al. disclose a processing portion adapted to arrange for the packet to be transmitted through without storing the packet identifier in the local memory portion if a transmit buffer to be associated with the packet does not exceed a pre-determined threshold (the transmission buffer is empty) (figure 12A, 1235, Home interconnection controller detects empty condition of transmission buffer) (figure 12A, 1240, Home interconnection controller sends control character without storing control character in transmission buffer) (page 1, [0014] determine when the remote transmission buffer is empty, page 2, [0016] forward the special packet for transmission on the inter-cluster link without storing the special packet in the remote transmission buffer) (page 2 [0031] determine an empty condition indicating that the transmission buffer is empty, [0033] forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer) (page 19, lines 3-6, claim 19, determine an empty condition

indicating that the transmission buffer is empty; forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer).

Both Marshall and Kota disclose transmitting packets. Kota recognizes arranging for the packet to be processed without storing the packet in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold. Thus, one would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate arranging for the packet to be processed without storing the packet in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold taught by Kota into the system of Marshall in order to prevent delays when processing the packets. Therefore, the combined system would have been enable to process the high speed network packets more efficiency.

22. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Marshall - Kota) in view of Shirai et al. (US Patent No. 5,734,654 03/31/1998).

Regarding to claim 2, the combined system (Marshall - Kota) discloses the limitations of claim 25 above; however, the combined system (Marshall - Kota) are silent to disclosing wherein the processing portion is further adapted to store the packet identifier in the local memory portion if the number of transmit buffers exceed the pre-determined threshold.

Shirai et al. disclose wherein the processing portion is further adapted to store the packet identifier in the local memory portion if the number of transmit buffers exceed

the pre-determined threshold (figure 18 shows if congestion is detected then packet is stored in common buffer means local memory, congestion is detected based on available resources such as port, transmitting buffer etc, buffer exceeds a predetermined references value, col. 2, lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Shirai to the combined system (Marshall - Kota) in order to store packet ID in local transmit queue, thereby preventing packets to being discarded (5,734,654, col. 3, lines 55-67).

23. Regarding to claim 27, Kota discloses wherein the processing portion is to arrange for the packet to be transmitted through the port without the packet identifier in the local memory portion on if (i) the number of transmit buffer does not exceed the pre-determined threshold (the transmission buffer is empty) (figure 12A, 1235, Home interconnection controller detects empty condition of transmission buffer) (figure 12A, 1240, Home interconnection controller sends control character without storing control character in transmission buffer) (page 1, [0014] determine when the remote transmission buffer is empty, page 2, [0016] forward the special packet for transmission on the inter-cluster link without storing the special packet in the remote transmission buffer) (page 2 [0031] determine an empty condition indicating that the transmission buffer is empty, [0033] forward the special packet to the inter-cluster link without storing the special packet in the transmission buffer) (page 19, lines 3-6, claim 19, determine an empty condition indicating that the transmission buffer is empty; forward the special

packet to the inter-cluster link without storing the special packet in the transmission buffer).

However, the combined system (Marshall - Kota) are silent to disclosing wherein the processing portion is to arrange for the packet to be transmitted through the port without storing the packet identifier in the local memory location if the port is available to transmit the packet.

Shirai teaches wherein the processing portion is to arrange for the packet to be transmitted through the port without storing the packet identifier in the local memory location if the port is available to transmit the packet (figure 18 shows if congestion is detected then packet is stored in common buffer means local memory, congestion is detected based on available resources such as port, transmitting buffer etc, buffer exceeds a predetermined references value, col. 2, lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Shirai to the combined system (Marshall - Kota) in order to store packet ID in local transmit queue, thereby preventing packets to being discarded (5,734,654, col. 3, lines 55-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EDAN ORGAD can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/11/08

/CHUONG T HO/
Temporary Grant of Partial Signatory Authority Examiner, Art Unit 2619